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| 09/933,017      | 08/21/2001  | Toru Murata          | Q65899              | 6073             |

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EXAMINER

BRIER, JEFFERY A

ART UNIT PAPER NUMBER

2672

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/933,017

**Applicant(s)**

MURATA, TORU

**Examiner**

Jeffery A. Brier

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 07 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12, 15-21 and 23-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12, 15-21 and 23-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Detailed Action***

***Response to Amendment***

1. The amendment filed on June 7, 2005 has been entered.

***Response to Arguments***

2. Applicants arguments filed on June 7, 2005 have been fully considered, however, they are deemed not persuasive to overcome the 35 USC 103 rejection.

The arguments on page 18 concerning claims 1-12 and 15-22 and the 35 USC 103 rejection are not persuasive to overcome the Miyashita and Yasukawa references because 1) Miyashita does not explicitly state the means by which the image data is transmitted from the personal computer 40 to projector 10 and 2) Yasukawa teaches transmitting the image data via an Ethernet network. Miyashita at column 7 lines 1-12 and column 12 lines 13-21 describes supplying a video signal to the projector 10 and in figures 4 and 5 only one communication path is illustrated as connecting the personal computer 40 to projector 10 while figure 6 illustrates a projector control signal line and a video signal line. Thus, either Miyashita teaches using one communication line for transmitting both the control and video signals or at least suggests to one of ordinary skill in the art to use one communication line for transmitting both the control and video signals. Yasukawa teaches transmitting both the control and video signals across one communication line is known and thus teaches such a transmission scheme is desirable. It would have been obvious to one of ordinary skill in the art in view of Yasukawa to transmit the image data on the Ethernet lines since this would reduce the

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need for additional cables to carry the video signals. This modification would save natural resources, save installation time of a new network, allow the use of an existing Ethernet network, and save money.

The arguments on page 18 concerning new claims 23-26 are not persuasive to overcome the Miyashita reference because Miyashita teaches at column 11 line 40 to column 12 line 35 converting the remote control codes at the computer into input device codes.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 17-19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 17-19

Claim 17 was amended to claim "wherein said remote control transmitter captures display contents received via said Ethernet interface device". The specification does not describe the remote controller as capturing the received display contents and does not describe capturing the received display contents on the remote personal computer.

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Note claims 1 and 7 also use the word captures which was added to these claims in the 7/6/2004 amendment. Previously these claims used the word selects rather than captures. Dependent claims 2 and 9 use the word selecting. It appears that in claims 17, 1, and 7 the word selects is more appropriate than captures and in claim 17 changing the word captures to selects may overcome the above 112 first paragraph rejection.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 21, 25, and 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 21, 25, and 26

It is not clear from these claims if the computer is executing the procedures of the program or if these claims are a program per se or if these claims are merely a computer readable storage medium. Also these claims appear to claim both a product, a computer readable medium recording a program to be executed by a computer, and a process of using the product, the claimed procedures. Ex parte Lyell, 17 USPQ2d 1548 (Bd. Pat. App. & Inter. 1990). These claims need to be amended to clearly claim one statutory class of invention.

***Claim Rejections - 35 USC § 101***

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. Claims 21, 25, and 26 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 21, 25, and 26

These claim appear to be directed to a program per se. Also the claims do not manifest that a computer is performing the method, thus, these claims appear to claim both a product, a computer readable medium recording a program to be executed by a computer, and a process of using the product, the claimed procedures. Ex parte Lyell, 17 USPQ2d 1548 (Bd. Pat. App. & Inter. 1990). These claims need to be amended to clearly claim one statutory class of invention.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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10. Claims 1-12, 15-21 and 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyashita, U.S. Patent No. 5,782,548, in view of Yasukawa, U.S. Patent No. 6,437,786.

Claims 1-12:

Miyashita, U.S. Patent No. 5,782,548, teaches a projector and associated remote control connected via a network to a PC.

Yasukawa, U.S. Patent No. 6,437,786, teaches a LAN connected projector which allows a user via keying input device 11 to enter commands into the projector such as next image. If the next image is not in the projector then the projector sends a command to the server to supply the next image to the projector, see column 11 lines 3-67 and column 12 lines 28-34 and line 44 to column 13 lines 10 and 30-50.

Miyashita does not explicitly teach the projector and the PC are connected by an Ethernet network and does not explicitly describe transmitting the image data via the Ethernet lines.

Yasukawa teaches a projector and PC connected by an Ethernet network and teaches transmitting image data on the Ethernet lines.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Miyashita's projector and PC for use in an Ethernet network because an Ethernet network is faster than an RS-232, see the speed limitation of this standard at <http://www.sangoma.com/signal.htm>

This Sangoma reference article teaches that RS-232 is slower than Ethernet. It teaches to overcome the speed limitations RS-232 is replaced by RS-422 and other balanced

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interfaces such as Ethernet. A portion of this reference is reproduced below with emphasis added.

**The standards for RS-232 and similar interfaces usually restrict RS-232 to 20kbps or less and line lengths of 15m (50 ft) or less. These restrictions are mostly throwbacks to the days when 20kbps was considered a very high line speed, and cables were thick, with high capacitance. (emphasis added)**

However, in practice, RS-232 is far more robust than the traditional specified limits of 20kbps over a 15m line would imply. Most 56kbps DSUs are supplied with both V.35 and RS-232 ports because RS-232 is perfectly adequate at speeds up to 200kbps. You may remember the "zero slot LANs" that were popular a few years ago, using RS-232 ports on PCs running at 115kbps. At Sangoma we have successfully used RS-232 (albeit on short cables) at line speeds of over 1.6Mbps.

Interestingly enough, most RS-232 ports on mainframes and midrange computers are capable of far higher speeds than their rated 19.2kbps. Usually these "low speed" ports will run error-free at 56kbps and above.

The 15m limitation for cable length can be stretched to about 30m for ordinary cable, if well screened and grounded, and about 100m if the cable is low capacitance as well. Our standard test cable at Sangoma is an interconnected run of round and flat cable, about 25M in length, with no screening at all. We run error-free on this cabling collection at up to 112kbps.

#### **S-422, RS-485, V.11 and other balanced interfaces.**

The limitations of RS-232 are largely eliminated by the balanced line interface.

A pair of wires is used to carry each signal. The data is encoded and decoded as a differential voltage between the two lines. A typical truth table for a balanced interface is as follows:

**$V_A - V_B < -0.2V = 0$**

**$V_A - V_B > +0.2V = 1$**

As a differential voltage, in principle the interface is unaffected by differences in ground voltage between sender and receiver.

Furthermore, if lines A and B are close together, they will be affected almost identically by external electromagnetic noise. If the lines are also twisted together, then neither line is permanently closer to a noise source than the other. Hence the well known "twisted pair" is extremely effective in eliminating noise from the signal.

**Balanced systems are used by LAN topologies like Ethernet and Token Ring. They can support line speeds over 100Mbps and work reliably at distances of several kilometers.(emphasis added)**



Therefore to ensure the delivery of images from the PC to the projector during the presentation with less delay of the delivery of the images which will cause less perceptible delay by the audience when the presenter changes the displayed image. One of ordinary skill in the art would select Ethernet over RS-232 to ensure a good presentation occurs.

RS-232C transmits communication control data as taught in the Sangoma reference article which states:

Pins 4 and 5 carry the **RTS** and **CTS** signals. In most situations, RTS and CTS are constantly on throughout the communication session. However where the DTE is connected to a multipoint line, RTS is used to turn carrier on the modem on and off. On a multipoint line, it is imperative that only one station is transmitting at a time. When a station wants to transmit, it raises RTS. The modem turns on carrier, typically waits a few milliseconds for carrier to stabilize, and raises CTS. The DTE transmits when it sees CTS up. When the station has finished its transmission, it drops RTS and the modem drops CTS and carrier together. This is explained further in our tutorial on the SDLC protocol, which uses multipoint lines extensively.

It also would have been obvious to one of ordinary skill in the art in view of Yasukawa to transmit the image data on the Ethernet lines since this would reduce the need for additional cables to carry the video signals. This modification would save natural resources, save installation time of a new network, allow the use of an existing Ethernet network, and save money.

A detailed analysis of claims 1-14 follows.

Claim 1:

Miyashita and Yasukawa teach an electronic presentation system (*Miyashita: see figure 4. Yasukawa: figures 3 and 4*) comprising:

Ethernet communication means (*Miyashita: serial transmission line 50 is a RS-232C network communication line which is a network communication means equivalent to that described by applicants specification because RS-232C allows multiple devices to communicate with any other device or devices connected to the network. Yasukawa: Network 33 and 40. At column 10 line 25 to column 11 line 19 various networks are described. Column 10 lines 25-30 teaches using Ethernet since 10 base 5, 10 base 2, and 10 base T cables are Ethernet cables.*);

a first image and voice display means (*Miyashita: projector 10. Yasukawa: projector 31.*) connected to said Ethernet communication means in which display control (*cursor position control, page advance, page return, etc, column 10 line 65 to column 11 line 15*) and communication control (*The remote control controls the communication of the cursor position control, page advance, page return, etc. Additionally as taught by the Sangoma reference article RS-232C provides communication control data and data on the RS-232C network.*) through said Ethernet communication means are controlled by remote control means (*Miyashita: column 9 lines 9-34, remote controller 20 controls the computer's presentation by transmitting signals to the projector 10 which transfers those signals to the computer via serial transmission line 50. This causes display control (cursor position control, page advance, page return, etc, column 10 line 65 to column 11 line 15) and communication control (RS-232C provides communication control data as taught by the Sangoma reference article.) to be sent from the projector to the computer. Yasukawa: keying input device 11.*); and

a personal computer (*Miyashita: PC 40. Yasukawa: PCs 32A, 32B, 41A, 41B*) provided with a second image (*Miyashita: display 44. Yasukawa: see figures 3 and 4, PCs 32A, 32B, 41A, 41B have their own display means*) and voice (*Miyashita: inherently Miyashita includes voice display means since the computer is displaying a presentation having both visual and audio. Yasukawa: since the computer is displaying a presentation having both visual and audio then the PCs have both image and voice display means.*) display means connected to said Ethernet communication means (*Miyashita: indirectly display 44 is connected to serial transmission line 50. Yasukawa: the PC's displays are connected to network bus 33 and 40 via the PC's network means.*) and different from said first image and voice display means placed in a position different from the position placing said first image and voice display means (*Miyashita: the location of the computer's display means is different than the location of the projector's display means since the projector and computer are physically separate devices, also note column 1 lines 41-54. Yasukawa: network 33 and 40 is discussed as either local intranet or the internet.*), and input means (*Miyashita: keyboard 46 and mouse 48. Yasukawa: this claim does not state what the input means is, thus, any input means of the PCs meets the broad claim limitation such as the network communication means.*);

wherein said remote control means captures display contents displayed by said personal computer on said second image and voice display means to display said captured display contents on said first image and voice display means at the same time (*Miyashita: at column 10 line 51 to line 18 many mouse commands may be*

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*programmed into the remote controller that will perform the function performed by the user using the mouse at the PC described at column 1 lines 10-38. This selection process causes the personal computer to capture displayed image on the personal computer and display it on the projector. At column 11 lines 4-19 page return and page advance buttons on the remote control are described. When the operator presses page return or page advance the system will return or advance the page displayed by the personal computer, capture the page, and transmit the page to the projector, see column 12 lines 28-36.), and*

wherein said Ethernet communication means is used to transfer said display contents, said display control and said communication control (*Miyashita does not explicitly teach the projector and the PC are connected by an Ethernet network and does not explicitly describe transmitting the image data via the Ethernet lines.*

*Yasukawa teaches a projector and PC connected by an Ethernet network and teaches transmitting image data on the Ethernet lines.).*

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Miyashita's projector and PC for use in an Ethernet network because an Ethernet network is faster than an RS-232, see the above discussion of RS-232 and Ethernet. This will ensure the delivery of images from the PC to the projector during the presentation with less delay of the delivery of the images which will cause less perceptible delay by the audience when the presenter changes the displayed image. One of ordinary skill in the art would select Ethernet over RS-232 to ensure a good presentation occurs.

It also would have been obvious to one of ordinary skill in the art in view of Yasukawa to transmit the image data on the Ethernet lines since this would reduce the need for additional cables to carry the video signals. This modification would save natural resources, save installation time of a new network, allow the use of an existing Ethernet network, and save money.

Claim 2:

Miyashita teaches the electronic presentation system according to claim 1, wherein said remote control means comprises a remote control transmitter (*see figure 5, infrared light emitting means 36 transmits signals*) sending a sending signal of a code corresponding to a depressed button (*column 9 lines 22-31*) and means for converting said sending signal of said remote control transmitter to a communication signal of said Ethernet communication means (*signal processor 60, computation control means 62 and I/O interface 66 converts the infrared signal into a signal compatible with serial transmission line 50*) and sending the communication signal (*via interface 66*);

wherein said personal computer comprises means for converting said sending signal of said remote control transmitter sent through said communication means to a signal (*I/O interface 72*) equivalent to an output signal of the input means (*I/O interface 74 generates signals from input means 46 and 48 equivalent to the signals generated by I/O interface 72, see column 9 lines 66-67 and column 10 lines 1-5. Miyashita teaches at column 11 line 40 to column 12 line 35 converting the remote control codes at the computer into input device codes.*) provided in said personal computer, means for

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selecting previously created display contents to be displayed as said display contents on said second image and voice display means (*the user is enabled to select an image on the computer display 44 for display by projector 10 such as provided by the page advance button, column 11 line 5*), by said converted signal equivalent to the output signal of said input means (*column 10 lines 1-5*), and means for converting a display signal of said selected display contents displayed on said second image and voice display means to a communication signal of said Ethernet communication means at the same time and sending the communication signal (*I/O interface 72 transmits the display signal corresponding to the selected display contents to the projector*) using said Ethernet communication means (*Obvious for the reasons given in the above discussion of claim 1.*);

wherein said remote control means further comprises means (*such as the buttons described at column 11 lines 4-6*) for sending the display signal of said second image and voice display means sent through said Ethernet communication means to said first image and voice display means (*Obvious to send the display signal over the Ethernet communication means for the reasons given in the above discussion of claim 1.*).

## Claim 3:

Miyashita teaches the electronic presentation system according to claim 2, wherein the selection of the previously created display contents displayed on said second image and voice display means, done by the signal equivalent to said converted output signal

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of said input means is executed by basic software (*bios is in all computers as well as operating system 100, column 9 lines 61-67*) installed in said personal computer (*personal computer 40*) and application software (*application software 120, column 9 lines 61-67*) operated under said basic software and used to previously create said display contents.

Claim 4:

Miyashita teaches the electronic presentation system according to claim 2, wherein said Ethernet communication means is a wired communication system (*Miyashita: the serial transmission line 50 is described as RS-232, column 8 lines 10-13, which is typically a wired communication system. Yasukawa: the term LAN includes both wired and wireless networks.*) .

Claim 5:

Miyashita teaches the electronic presentation system according to claim 2, wherein said Ethernet communication means is a wireless communication system (*Miyashita: the serial transmission line 50 is described as RS-232, column 8 lines 10-13, which is typically a wired communication system, however, wireless RS-232 is known and used in wireless communications systems. Yasukawa: the term LAN includes both wired and wireless networks.*).

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Claim 6:

The PC is remotely connected in both Miyashita and Yasukawa to the projector, thus, second image and voice display means is remotely connected to the first image and voice display means.

Claim 7:

This claim is a device claim version of means plus function claim 1 and is rejected for the reasons given for claim 1.

Claim 8:

This claim is a device claim version of means plus function claim 6 and is rejected for the reasons given for claim 6.

Claim 9:

This claim is a device claim version of means plus function claim 2 and is rejected for the reasons given for claim 2.

Claim 10:

This claim is a device claim version of means plus function claim 3 and is rejected for the reasons given for claim 3.



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Claim 11:

This claim is a device claim version of means plus function claim 4 and is rejected for the reasons given for claim 4.

Claim 12:

This claim is a device claim version of means plus function claim 5 and is rejected for the reasons given for claim 5.

Claims 15-21 and 23-26:

Claims 15,16, 20, 21, and 23-26 recite similar features found in claims 1 and 2 .

Therefore they are rejected for the reasons given for claims 1 and 2.

Claims 17-19 recite similar features found in claim 1. Therefore they are rejected for the reasons given for claim 1.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

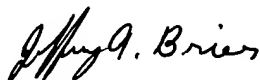
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffery A Brier whose telephone number is (571) 272-7656. The examiner can normally be reached on M-F from 7:00 to 3:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi, can be reached at (571) 272-7664. The fax phone Number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Jeffery A Brier  
Primary Examiner  
Art Unit 2672